

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-33. (canceled)

34. (new) A method for the generation of data packets, by at least one upstream device (1) for transmission over at least one network connection, the method comprising:

at the start of a connection, initialization of a transmitted packets counter by the upstream device (1) to an initial count value;

incrementing the said counter by a specified value for each packet transmitted, to define a current count value of the packet; and

copying the current count value into the packet header, wherein the initial count value is selected at the upstream device (1) from a set of predetermined initial values such that the difference between two consecutive initial values in the set is very much greater than a predetermined threshold used in a downstream device to select packets.

35. (new) A method according to claim 34, wherein when the current count value is presented in the binary form of a recording of n bits, the set of initial count values is such that a field of 1 bits of the count value, 1 always being less than n , is systematically initialized to zero, the field being positioned in such a way that when the number of transmitted packets reaches the predetermined threshold at least one bit in the field takes the value 1.

36. (new) A method according to claim 35, wherein when the field of 1 bits is positioned between a bit of rank m and a bit of rank $m+1$ in the count value, the initial count values will be greater than 2^{l+m} .

37. (new) A method according to claim 36, wherein the predetermined threshold is equal to $2^{m+1} - 1$.

38. (new) A method according to claim 37, wherein the initial count values are multiples of 2^{l+m} .

39. (new) A method according to claim 37, wherein the bits of low weight in the initial count values are selected randomly from the bits of rank below t , t always being less than m .

40. (new) A method according to claim 39, wherein the number of bits of low weight t is the whole part of the base 2 logarithm of the maximum packet size permitted on the network.

41. (new) A system for generating data packets in an upstream device, said packets being destined for transmission via at least one connection established via a network, the system comprising:

an information processing unit (9); and

an information storage means (10) comprising at least one register (11) capable of storing a number of transmitted packets,

the information processing unit comprising

i) initialization means (9a) for initialising the register to an initial count value at the start of the connection,

ii) incrementing means (9b) for incrementing the contents of the register whenever a new packet is created, and

iii) copying means (9c) for copying the register contents into a current count value field in the packet header block,

wherein the initialization means (9a) comprise selecting means (9d) for selecting the initial count value of at least one connection from a set of predetermined initial values such that the difference between two consecutive initial values

in that set is very much greater than a predetermined threshold used in a downstream device to select packets.

42. (new) A packet generating system according to claim 41, wherein when the current count value is in the binary form of a recording of n bits, the set of initial count values is such that a field of 1 bits of the count value, where 1 is always smaller than n , is systematically initialized to 0.

43. (new) A packet generating system according to claim 42, wherein the incrementing means (9b) comprise means (9f) for setting at least one bit in the field of 1 bits to the value of 1 when the number of packets transmitted exceeds the predetermined threshold.

44. (new) A system for the processing of data packets from at least one connection of a network comprising:

receiving means (12) for packets originating from upstream device, each packet having a current count value in its header block; and

information processing means (14),

wherein the information processing means (14) comprises
i) a table (15) of initial count values, ii) means (14a) for calculating the difference between the current count value in the header of the received packet and the initial value in the table

immediately below that current count value, and iii) means (14b) for comparing this difference with a predetermined threshold, whereby the difference between two consecutive initial values is very much greater than said predetermined threshold.

45. (new) A packet processing system according to claim 44, wherein the means for calculating the difference and comparison with the predetermined threshold makes a comparison between a field of 1 bits of the current count value and zero.

46. (new) A method for the selection by a downstream device (3a, 3b, 3c) of data packets, the data packets having being transmitted by an upstream device (1) over at least one network connection, the method comprising:

reception by the downstream device (3a, 3b, 3c) of a IP packet of the connection; and

comparison by the downstream device (3a, 3b, 3c) of a predetermined threshold of the quantities of data transmitted through the connection, with the difference between the current count value in the header of the received packet and the immediately lower initial value in a set of predetermined initial values from which an initial count value is selected in the generation of the packets,

whereby the difference between two consecutive initial values is very much greater than said predetermined threshold.

47. (new) A selection method according to claim 46, characterized in that the packets corresponding to the connections which have transmitted less data than the predetermined threshold are selected in preference to the packets corresponding to connections which have transmitted more data than the predetermined threshold.